

SEQUENCE LISTING

<110> Chr. Hansen A/S
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<120> IMPROVED METHOD OF PRODUCING AN ASPARTIC PROTEASE POLYPEPTIDE IN
A RECOMBINANT HOST ORGANISM

<130> P1031US00

<150> PA 2002 0092

<151> 2002-06-17

<160> 8

<170> PatentIn version 3.3

<210> 1

<211> 323

<212> PRT

<213> Bos taurus

<400> 1

Gly Glu Val Ala Ser Val Pro Leu Thr Asn Tyr Leu Asp Ser Gln Tyr
1 5 10 15

Phe Gly Lys Ile Tyr Leu Gly Thr Pro Pro Gln Glu Phe Thr Val Leu
20 25 30

Phe Asp Thr Gly Ser Ser Asp Phe Trp Val Pro Ser Ile Tyr Cys Lys
35 40 45

Ser Asn Ala Cys Lys Asn His Gln Arg Phe Asp Pro Arg Lys Ser Ser
50 55 60

Thr Phe Gln Asn Leu Gly Lys Pro Leu Ser Ile His Tyr Gly Thr Gly
65 70 75 80

Ser Met Gln Gly Ile Leu Gly Tyr Asp Thr Val Thr Val Ser Asn Ile
85 90 95

Val Asp Ile Gln Gln Thr Val Gly Leu Ser Thr Gln Glu Pro Gly Asp
100 105 110

Val Phe Thr Tyr Ala Glu Phe Asp Gly Ile Leu Gly Met Ala Tyr Pro
115 120 125

Ser Leu Ala Ser Glu Tyr Ser Ile Pro Val Phe Asp Asn Met Met Asn
130 135 140

Arg His Leu Val Ala Gln Asp Leu Phe Ser Val Tyr Met Asp Arg Asn
145 150 155 160

Gly Gln Glu Ser Met Leu Thr Leu Gly Ala Ile Asp Pro Ser Tyr Tyr
165 170 175

Thr Gly Ser Leu His Trp Val Pro Val Thr Val Gln Gln Tyr Trp Gln
180 185 190

Phe Thr Val Asp Ser Val Thr Ile Ser Gly Val Val Val Ala Cys Glu
195 200 205

Gly Gly Cys Gln Ala Ile Leu Asp Thr Gly Thr Ser Lys Leu Val Gly
210 215 220

Pro Ser Ser Asp Ile Leu Asn Ile Gln Gln Ala Ile Gly Ala Thr Gln
225 230 235 240

Asn Gln Tyr Gly Glu Phe Asp Ile Asp Cys Asp Asn Leu Ser Tyr Met
245 250 255

Pro Thr Val Val Phe Glu Ile Asn Gly Lys Met Tyr Pro Leu Thr Pro
260 265 270

Ser Ala Tyr Thr Ser Gln Asp Gln Gly Phe Cys Thr Ser Gly Phe Gln
275 280 285

Ser Glu Asn His Ser Gln Lys Trp Ile Leu Gly Asp Val Phe Ile Arg
290 295 300

Glu Tyr Tyr Ser Val Phe Asp Arg Ala Asn Asn Leu Val Gly Leu Ala
305 310 315 320

Lys Ala Ile

<210> 2
<211> 1142
<212> DNA
<213> artificial

<220>
<223> DNA fragment comprising a DNA fragment of 1138 bp designed to
comprise a N-H-T glycosylation site and unique SalI and XhoI
sites for cloning purposes (modB-XS).

<400> 2

cggtcgaccg ctacggtgac tgacacctgg cgtgccgaga tcaactcgcat cccctctac	60
aagggcaagt ctctgcgtaa ggctctcaag gagcacggtc tgctcgagga tttcctgcag	120
aagcagcagt acggcatcag ctctaagtac agcggtttcg gcgaggtggc cagcgtgcct	180
ctcactaact acctggacag ccagtacttc ggtaagatct accttggcac tccccctcag	240
gagttcaccg ttctgttcga tactggttcc agcgacttct gggttccctc catctactgt	300
aagagcaacg cttgcaagaa ccaccagcgc ttgatcctc gcaagtccag caccttccag	360
aaccttggca agcccccttc catccactac ggtactggca gcatgcaggg tacccttggc	420
tacgacaccg ttaccgtgtc caacatcgtc gatattcagc agaccgtggg tctgagcacc	480
caggagcctg gcgatgtctt cacttacgcc gagttcgatg gtatcctcgg catggcttac	540
ccctccctgg cctctgagta ctctatccct gtgttcgaca acatgatgaa ccgccacctc	600
gtcgctcagg atctgttcag cgtgtacatg gaccgtaacg gtcaggagtc catgcttact	660
ctgggcgcca tcgatccctc ttactacacc ggttccctcc actgggttcc tgtgaccgtc	720
cagcagtact ggcagttcac cgtggacagc gtcactatct ccggcgtggg tgtggcttgc	780
gaggggtggc gtcaggccat ccttgatact ggtaccagca agctcgtcgg cccctccagc	840
gacatcctga acatccagca ggctatcggg gccaccacga accagtacgg cgagttcgat	900
atcgactgcg ataacctttc ttacatgcct actgtggttt tcgagatcaa cggtgaagatg	960
tacccccctta ctcttctgc ttacacttcc caggatcagg gcttctgtac ctctggtttc	1020
cagtctgaga accacagcca gaagtggatc cttggcgatg tcttcatccg cgagtactac	1080
tccgtcttcg accgtgccaa caacctgggtg ggtctcgcta aggccatctg atcctctaga	1140
gt	1142

<210> 3
 <211> 408
 <212> DNA
 <213> artificial

<220>

<223> an approximately 410 bp SalI-SphII I fragment made using
 synthetic oligonucleotides (SEQ ID XXX-1)

<400> 3

cggtcgaccg ctacggtgac tgacacctgg cgtgccgaga tcaactcgcat cccctctac	60
aagggcaagt ctctgcgtaa ggctctcaag gagcacggtc tgctcgagga tttcctgcag	120
aagcagcagt acggcatcag ctctaagtac agcggtttcg gcgaggtggc cagcgtgcct	180
ctcactaact acctggacag ccagtacttc ggtaagatct accttggcac tccccctcag	240
gagttcaccg ttctgttcga tactggttcc agcgacttct gggttccctc catctactgt	300

aagagcaacg cttgcaagaa ccaccagcgc ttogatcctc gcaagtccag caccttccag 360

aacottggca agcccccttc catccactac ggtactggca gcatgcag 408

<210> 4
<211> 233
<212> DNA
<213> artificial

<220>

<223> an approximately 220 bp SphI-BsrGI fragment made using synthetic oligonucleotides (SEQ ID XXX-2)

<400> 4
gcagcatgca gggatatcctt ggctacgaca ccgttacggt gtccaacatc gtcgatattc 60

agcagaccgt ggggtctgagc acccaggagc ctggcgatgt cttcacttac gccgagttcg 120

atgggtatcct cggcatggct taccctccc tggcctctga gtactctatc cctgtgttcg 180

acaacatgat gaaccgccac ctgcgcgctc aggatctggt cagcgtgtac atg 233

<210> 5
<211> 200
<212> DNA
<213> Artificial

<220>

<223> an approximately 190 bp BsrGI-KpnI fragment made using synthetic oligonucleotides (SEQ ID XXX-3)

<400> 5
gcgtgtacat ggaccgtaac ggtcaggagt ccatgcttac tctgggcgcc atcgatccct 60

cttactacac cggttccctc cactgggttc ctgtgaccgt ccagcagtac tggcagttca 120

ccgtggacag cgtcactatc tccggcgtgg ttgtggcttg cgaggggtggc tgtcaggcca 180

tccttgatac tgggtaccagc 200

<210> 6
<211> 334
<212> DNA
<213> artificial

<220>

<223> an approximately 320 bp KpnI-XbaI fragment made using synthetic oligonucleotides (SEQ ID XXX-4)

<400> 6
ctggtaccag caagctcgtc ggcccctcca gcgacatcct gaacatccag caggctatcg 60

gtgccacca gaaccagtac ggcgagttcg atatcgactg cgataacctt tcttacatgc 120

ctactgtggt ttctgagatc aacggtaaga tgtacccctt tactccttct gcttacactt 180

cccaggatca gggcttctgt acctctggtt tccagtctga gaaccacagc cagaagtgga 240

tccttggcga tgtcttcac cgcgagtact actccgtctt cgaccgtgcc aacaacctgg 300
 tgggtctcgc taaggccatc tgatcctcta gagt 334

<210> 7
 <211> 334
 <212> DNA
 <213> artificial

<220>
 <223> a modified KpnI-XbaI fragment designed for construction of the
 modBM gene (SEQ ID XXX-5).

<400> 7
 ctggtaccag caagctcgtc ggccctcca ggcacatcct gaacatccag caggctatcg 60
 gtgccaccca gaaccagtac ggcgagttcg atatcgactg cgataacctt tcttacatgc 120
 ctactgtggt ttctcgagatc aacggtaaga tgtacccctt tactccttct gcttacactt 180
 ccaggatca gggcttctgt acctctggtt tccagtctga gaaccacacc cagaagtgga 240
 tccttggcga tgtcttcac cgcgagtact actccgtctt cgaccgtgcc aacaacctgg 300
 tgggtctcgc taaggccatc tgatcctcta gagt 334

<210> 8
 <211> 66
 <212> DNA
 <213> artificial

<220>
 <223> synthetic polylinker (SalI-SphI-BsrGI-KpnI-XbaI) (SEQ ID XXX-6)

<400> 8
 ggccaggcgc gccttccatg gaagaatgcg gccgctaaac catcgatggc tcgagttggc 60
 gcgcca 66